FIG. 9-1

Filtering coefficients for the first level of wavelet decomposition.

$$h_{i,j}^0 \ (i,j = 0,1,...,20)$$

Row \ Column	1	2	3	4	5	6	7	8	9	10	11	12
1	0.00000002	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
2	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
3	-0.00000010	0.00000000	0.00000000	-0.00000001	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
4	0.00000000	-0.00000001	0.00000001	0.00000000	0.00000001	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
5	0.00000053	0.00000001	-0.00000005	0.00000004	0.00000005	-0.00000001	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
6	-0.00000001	0.00000004	0.00000005	0.00000004	0.00000005	-0.00000001	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
7	-0.00000271	-0.00000003	0.00000003	0.00000000	0.00000001	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
8	0.00000051	0.00000021	0.00000023	0.00000019	0.00000021	0.00000003	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
9	0.00001369	0.00000136	0.00000009	0.00000061	0.00000100	0.00000001	0.00000001	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
10	0.00000178	0.00000087	0.00000143	0.00000005	0.00000026	0.00000004	0.00000006	0.00000001	0.00000000	0.00000001	0.00000000	0.00000000
11	-0.00007364	0.00000544	0.00000551	0.00000149	0.00000435	0.00000061	0.00000130	0.00000003	0.00000029	0.00000004	0.00000001	0.00000001
12	0.00000299	-0.00000518	0.00000474	0.00000004	0.00000134	0.00000014	0.00000047	0.00000008	0.00000016	0.00000000	0.00000000	0.00000000
13	0.00041019	0.00003008	0.00002944	0.00001573	0.00001730	0.00000283	0.00000529	0.00000018	0.00000094	0.00000016	0.00000004	0.00000001
14	-0.00016031	0.00000410	-0.00000448	-0.00000901	0.00000242	0.00000114	0.00000060	0.00000040	0.00000018	0.00000016	0.00000003	0.00000002
15	-0.00193295	-0.00026852	0.00025435	-0.00005571	-0.00009557	0.00000880	0.00025435	0.00000448	0.00001573	0.00000474	0.00000551	-0.00000070
16	-0.00095144	0.00016141	-0.00000201	-0.00000281	-0.00000370	0.00000153	0.00000880	-0.00000060	-0.00000283	0.00000014	0.00000130	0.00000006
17	0.01554475	0.00066192	0.00054612	0.00020612	-0.00005996	-0.00005370	-0.00009557	-0.00000242	0.00001730	-0.00000134	0.00000436	-0.00000028
18	-0.00304332	0.00136103	-0.00126592	0.00002280	0.00020612	-0.00005370	-0.00005571	-0.00000901	-0.00000134	0.00000004	0.00000146	0.00000005
19	-0.07749230	0.00621867	0.00583947	-0.00126582	-0.00054612	0.00014289	0.00025435	0.00000901	0.00001573	0.00000474	-0.00000551	-0.00000005
20	0.08046033	0.00651641	0.00621867	0.00136103	0.00066192	-0.00016141	-0.00026852	0.00000410	-0.00003008	-0.00000518	-0.00000544	0.00000087
21	0.47367335	0.08046033	-0.07749230	-0.00304332	0.01554475	-0.00095144	-0.00193295	-0.00016031	0.00041019	0.00000299	-0.00007364	0.00000178

Column\Row	13	14	15	16	17	18	19	20	21
1	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
2	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
3	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
4	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
5	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
6	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
7	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
8	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
9	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
10	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
11	-0.00000002	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
12	-0.00000001	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
13	0.00000006	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
14	0.00000001	0.00000000	0.00000001	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
15	-0.00000026	0.00000000	0.00000005	-0.00000001	-0.00000001	0.00000000	0.00000000	0.00000000	0.00000000
16	-0.00000011	-0.00000001	0.00000003	0.00000000	0.00000001	0.00000000	0.00000000	0.00000000	0.00000000
17	0.00000086	0.00000000	-0.00000018	0.00000001	0.00000004	0.00000000	-0.00000001	0.00000000	0.00000000
18	0.00000070	0.00000004	-0.00000016	0.00000000	0.00000003	0.00000000	-0.00000001	0.00000000	0.00000000
19	-0.00000124	0.00000006	0.00000018	-0.00000003	-0.00000004	0.00000000	0.00000001	0.00000000	0.00000000
20	0.00000121	-0.00000008	-0.00000017	0.00000003	0.00000003	0.00000000	-0.00000001	0.00000000	0.00000000
21	0.00001204	0.00000052	-0.00000233	0.00000000	0.00000044	0.00000000	-0.00000008	0.00000000	0.00000002

Filtering coefficients for the first level of wavelet decomposition.

FIG. 9-2

Filtering coefficients for the second level of wavelet decomposition.

$$h^1_{i,j}\ (i,j=0,1,\dots,20)$$

Column j / Row i	1	2	3	4	5	6	7	8	9	10	11	12
1	0.00000002	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
2	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
3	-0.00000009	-0.00000000	-0.00000001	-0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
4	0.00000000	0.00000000	0.00000000	0.00000000	-0.00000001	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
5	0.00000046	0.00000003	0.00000004	0.00000004	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
6	0.00000000	0.00000000	-0.00000003	0.00000000	-0.00000001	-0.00000001	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
7	-0.00000241	-0.00000018	0.00000019	-0.00000017	0.00000018	0.00000003	0.00000006	0.00000001	-0.00000001	0.00000000	0.00000000	0.00000000
8	0.00000051	-0.00000008	0.00000008	0.00000004	-0.00000018	-0.00000001	0.00000000	0.00000000	0.00000001	0.00000000	0.00000000	0.00000000
9	0.00001237	0.00000123	0.00000128	0.00000072	-0.00000069	-0.00000011	-0.00000027	-0.00000001	0.00000006	-0.00000001	0.00000002	0.00000000
10	0.00000187	0.00000079	-0.00000072	0.00000004	0.00000023	0.00000003	-0.00000005	-0.00000001	-0.00000000	0.00000000	0.00000000	0.00000000
11	-0.00005793	0.00000483	-0.00000482	-0.00000317	-0.00000396	0.00000054	-0.00000115	-0.00000002	0.00000025	-0.00000004	-0.00000001	0.00000000
12	0.00000180	0.00000495	0.00000455	-0.00000014	-0.00000128	0.00000012	-0.00000044	-0.00000007	-0.00000014	0.00000000	-0.00000004	0.00000000
13	0.00038895	0.00002709	0.00002621	0.00001475	-0.00001576	-0.00000261	0.00000476	0.00000015	0.00000080	-0.00000014	0.00000025	0.00000002
14	-0.00016234	0.00000358	-0.00000401	-0.00000868	0.00000269	0.00000105	0.00000060	0.00000037	0.00000015	-0.00000007	-0.00000002	-0.00000005
15	-0.00025898	0.00024494	0.00005349	-0.00009021	0.00000805	0.00002428	0.00000060	-0.00000476	0.00000044	0.00000115	-0.00000002
16	-0.00097797	0.00015240	-0.00005349	-0.00005187	0.00000805	0.00000133	0.00000105	0.00000060	-0.00000261	-0.00000012	0.00000054	0.00000003
17	0.01534378	0.00059914	0.00048562	0.00019644	-0.00034831	-0.00005187	-0.00009021	0.00000269	0.00001576	-0.00000128	0.00000396	0.00000023
18	-0.00288156	0.00137763	-0.00128885	0.00000824	-0.00019644	0.00003267	-0.00005349	-0.00000868	-0.00001475	-0.00000014	0.00000317	-0.00000004
19	-0.07733850	-0.00602388	0.00565912	-0.00128885	0.00048562	0.00013594	0.00024484	-0.00000401	0.00002621	0.00000455	-0.00000402	-0.00000072
20	0.08023786	0.00640669	-0.00602388	0.00137763	0.00059914	-0.00015240	-0.00025898	-0.00000358	0.00002709	-0.00000495	0.00000483	0.00000079
21	0.47382555	0.08023786	-0.07733850	-0.00288156	0.01534378	-0.00097797	-0.00184546	-0.00016234	0.00038895	-0.00000180	-0.00005793	0.00000187

FIG. 10-1

FIG. 10-2

Filtering coefficients for the second level of wavelet decomposition.

Column\Row	13	14	15	16	17	18	19	20	21
1	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
2	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
3	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
4	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
5	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
6	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
7	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
8	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
9	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
10	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
11	-0.00000002	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
12	-0.00000001	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
13	0.00000006	-0.00000000	-0.00000001	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
14	0.00000001	0.00000000	-0.00000001	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
15	-0.00000027	0.00000000	0.00000006	0.00000000	-0.00000001	0.00000000	0.00000000	0.00000000	0.00000000
16	-0.00000011	-0.00000001	-0.00000003	0.00000000	-0.00000001	0.00000000	0.00000000	0.00000000	0.00000000
17	0.00000089	0.00000000	-0.00000018	0.00000001	-0.00000004	0.00000000	-0.00000001	0.00000000	0.00000000
18	0.00000072	0.00000004	0.00000018	-0.00000003	-0.00000004	0.00000000	-0.00000001	0.00000000	0.00000000
19	-0.00000128	0.00000008	-0.00000019	-0.00000003	-0.00000004	0.00000000	-0.00000001	0.00000000	0.00000000
20	0.00000123	-0.00000006	-0.00000018	-0.00000003	-0.00000003	0.00000000	-0.00000001	0.00000000	0.00000000
21	0.00001237	0.00000051	-0.00000241	0.00000000	0.00000046	0.00000000	-0.00000009	0.00000000	0.00000002

Filtering coefficients for the third level of wavelet decomposition.

$$h_{i,j}^2 \; (i,j = 0,1,...,20)$$

Row \ Column	1	2	3	4	5	6	7	8	9	10	11	12
1	0.00000002	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
2	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
3	-0.00000008	-0.00000001	0.00000000	0.00000001	-0.00000001	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
4	0.00000050	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
5	0.00000044	0.00000003	-0.00000004	0.00000003	-0.00000004	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
6	0.00000000	0.00000000	-0.00000003	0.00000003	-0.00000001	0.00000000	-0.00000001	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
7	-0.00000233	-0.00000017	0.00000018	-0.00000018	-0.00000018	-0.00000003	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
8	-0.00000052	-0.00000008	0.00000008	0.00000000	0.00000018	-0.00000003	0.00000005	0.00000000	-0.00000001	0.00000000	0.00000000	0.00000000
9	0.00001204	0.00000121	-0.00000124	0.00000004	0.00000000	0.00000021	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
10	0.00000189	0.00000078	0.00000124	0.00000070	0.00000086	-0.00000011	0.00000026	-0.00000001	0.00000006	-0.00000001	0.00000000	0.00000000
11	-0.00008849	-0.00000470	-0.00000464	0.00000309	0.00000023	-0.00000003	0.00000005	0.00000001	0.00000002	0.00000001	0.00000002	0.00000000
12	0.00000148	0.00000489	0.00000449	0.00000016	0.00000385	0.00000052	0.00000112	-0.00000002	0.00000024	0.00000004	0.00000000	0.00000000
13	0.00013337	0.00002616	-0.00002514	0.00001449	0.00001535	0.00000012	0.00000044	0.00000007	0.00000014	0.00000000	0.00000004	0.00000000
14	-0.00016301	-0.00000345	-0.00002514	0.00000858	-0.00000275	-0.00000256	-0.00000452	0.00000015	0.00000077	0.00000014	-0.00000024	0.00000002
15	-0.00182289	0.00025672	0.00024232	-0.00005290	-0.00000876	0.00000102	0.00002376	0.00000061	0.00000015	-0.00000067	0.00000002	-0.00000001
16	-0.0009948	-0.00014985	0.00013401	-0.00005290	0.00000785	0.00000785	0.00000785	-0.00000061	-0.00000062	-0.00000044	0.00000112	-0.00000005
17	0.01529107	0.00056164	-0.00048943	0.00019374	0.00034524	-0.00005140	-0.00008876	0.00000102	-0.00000256	-0.00000012	0.00000052	0.00000003
18	-0.00283905	0.00138132	-0.00129472	0.00000432	0.00019374	-0.00000259	-0.00005290	0.00000275	0.00001535	-0.00000127	0.00000385	0.00000023
19	-0.0779832	-0.00597188	0.00561059	-0.00129472	-0.00046943	-0.00013401	0.00024232	0.00000391	0.00002514	0.00000016	-0.0000309	-0.00000304
20	0.08017953	0.00635153	-0.00597189	0.00138132	0.00056164	-0.00014985	-0.00025672	0.00000858	-0.00000449	-0.00000449	0.00000464	-0.00000070
21	0.47366529	0.08017953	-0.07729922	-0.00283905	0.01529107	-0.00099480	-0.00182289	-0.00016301	0.00018357	0.00000148	-0.00005648	0.00000109

FIG. 11-1

FIG. 11-2

Filtering coefficients for the third level of wavelet decomposition.

Column / Row	13	14	15	16	17	18	19	20	21
1	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	
2	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
3	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
4	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
5	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
6	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
7	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
8	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
9	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
10	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
11	-0.00000002	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
12	-0.00000001	0.00000000	-0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
13	0.00000006	0.00000000	-0.00000001	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
14	0.00000001	0.00000000	-0.00000001	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
15	-0.00000026	-0.00000000	0.00000000	0.00000000	-0.00000001	0.00000000	0.00000000	0.00000000	0.00000000
16	-0.00000011	-0.00000001	0.00000000	-0.00000000	-0.00000001	0.00000000	0.00000000	0.00000000	0.00000000
17	0.00000086	0.00000003	0.00000018	0.00000001	-0.00000001	0.00000000	-0.00000001	0.00000000	0.00000000
18	0.00000070	-0.00000004	0.00000016	0.00000000	0.00000004	0.00000000	-0.00000001	0.00000000	0.00000000
19	-0.00000124	-0.00000008	0.00000018	0.00000003	0.00000003	0.00000000	-0.00000001	0.00000000	0.00000000
20	-0.00000121	-0.00000008	-0.00000017	-0.00000003	-0.00000004	0.00000000	-0.00000001	0.00000000	0.00000000
21	0.00001204	0.00000052	-0.00000233	0.00000000	0.00000044	0.00000000	-0.00000008	0.00000000	0.00000002